



Legislative Audit Division

State of Montana

Report to the Legislature

February 2003

Limited Scope Performance Audit

Noxious Weed Management on State Lands

This report recommends:

- ▶ **Montana Department of Agriculture to improve biennial reports prepared by weed districts and state agencies to provide assessments of noxious weed management effectiveness on state lands.**
- ▶ **Department of Natural Resources and Conservation:**
 - **Review alternatives for establishing grazing lease incentives to promote weed management.**
 - **Identify noxious weed infestations and establish a process for monitoring priorities.**
 - **Establish weed management enforcement options.**
 - **Identify weed management projects warranting DNRC involvement.**

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February 2003

The Legislative Audit Committee
of the Montana State Legislature:

We conducted a performance audit of noxious weed management on state lands. Our audit work included a review of weed control activities of the departments of Corrections, Fish, Wildlife and Parks, Natural Resources and Conservation, and Transportation, as well as the University System. According to Montana law, these agencies are required to establish written agreements with county weed districts addressing noxious weed management on all state lands. This report contains recommendations for improving state lands weed management effectiveness. Written responses from the departments of Agriculture and Natural Resources and Conservation are included at the end of the report.

We appreciate the cooperation of the various state agency staff and county weed district officials who assisted with the audit.

Respectfully submitted,

(Signature on File)

Scott A. Seacat
Legislative Auditor

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Performance Audit

Noxious Weed Management on State Lands

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Appointed and Administrative Officials

Montana Department of Agriculture	Ralph Peck, Director Greg Ames, Administrator, Agricultural Sciences Division
Department of Corrections	Bill Slaughter, Director Bill Dabney, Prison Ranch Manager
Department of Fish, Wildlife and Parks	Jeff Hagener, Director
Department of Natural Resources and Conservation	Bud Clinch, Director Tom Schultz, Administrator, Trust Land Management Division
Montana Department of Transportation	Dave Galt, Director John Blacker, Administrator, Maintenance Division
University System	Rod Sundsted, Associate Commissioner of Fiscal Affairs

Introduction

At the request of the Legislative Audit Committee (LAC), the Legislative Audit Division conducted a limited scope performance audit of noxious weed management activities on state lands. In May 2001, the LAC received a letter signed by over 100 Montana legislators requesting the performance audit. The majority of state lands are designated as school trust lands. Revenue generated from leasing for grazing, agriculture, minerals and forest harvesting on these state lands is used to support schools funding. We included lands administered by five agencies in our review:

- ▶ Department of Natural Resources and Conservation (DNRC)
- ▶ Montana Department of Transportation (MDT)
- ▶ Department of Fish, Wildlife, and Parks (FWP)
- ▶ Department of Corrections (DOC)
- ▶ The University System

According to section 7-22-2151, MCA, noxious weed management in Montana is administered through cooperative agreements between state agencies and weed boards. These agreements should include:

- ▶ Six-year integrated noxious weed management plan.
- ▶ Noxious weed management goals statement.
- ▶ Plan of operations for the biennium, including budget.
- ▶ A biennial performance report from the weed board to the state weed coordinator in the Montana department of Agriculture (MDA).

Conclusion: Agencies are in compliance with Written Agreement and Six-year Plan Requirements.

We found all agencies were generally in compliance with the requirements of the law. Written agreements were in place. The six-year plans included a goals statement and made reference to budget requirements.

Biennial Performance Reports

We noted the majority of the reports were generic and did not provide an indication of specific weed control activities. There was

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no attempt to consolidate biennial reports or to generate a statewide assessment. We do not believe the current contents of biennial reports provide an assessment of effectiveness. As a result, the weed district biennial reports are not used. A consolidated report reflecting an assessment of weed management effectiveness on state lands could be useful to the legislature and the executive branch. Currently, legislators are not provided any statewide noxious weed information. We recommend MDA:

- A. Develop biennial report criteria and format to assess the status of noxious weeds on state lands in each county.
- B. Establish procedures for joint weed districts and state agency report preparation, coordination, and submission.
- C. Consolidate weed district biennial reports into a statewide state lands noxious weed report for submission to the legislature and governor.

Noxious Weeds on Trust Lands

The Montana Weed Management Plan indicates 9 percent of state lands are infested with noxious weeds. Since “infested” was not defined in the plan, we assumed infestation meant some level of noxious weeds compared to total vegetation. To develop an indicator of the infestation level, we accompanied weed coordinators in 20 counties to 119 randomly selected parcels of leased trust lands. We asked weed coordinators to rate the percent of noxious weeds visible compared to total vegetation. Coordinators rated 43 percent of the parcels as zero noxious weeds visible and 36 percent as 1 to 9 percent of the vegetation. In the remaining 21 percent of the parcels, noxious weeds accounted for 10 to 100 percent of total vegetation. Using this assessment indicator, we conclude noxious weed infestation on state lands could be higher than the 9 percent figure identified in the state management plan.

According to section 77-1-106, MCA, lease rental rates and fees should consider the best interests of the state with regard to the long-term productivity of school trust lands, while optimizing the return to the school trust. If the percent of infested parcels increases and/or the level of infestation on parcels increases, then carrying capacity is reduced and less revenue is available to the trust. If infested parcels

and/or the level of infestation decreases, carrying capacity and trust revenue can increase.

Alternatives for Grazing Lease Incentive

Historically, the department has relied on lessees for noxious weed control. According to section 7-22-2149, MCA, if a weed district conducts noxious weed control on leased state lands, the lessee is responsible for the bill. In addition, section 36.25.132, ARM, states the lessee shall keep the land free of noxious weeds at their own cost. The conditions of the lease agreement also designate the lessee as responsible for weed control. This contractual agreement is important, because it not only designates the lessee responsible for weed control, but also implies the department is responsible for oversight.

Establish an Incentive for Noxious Weed Control on Grazing Lands

The results of our state lands parcel assessment indicate noxious weeds are a more significant problem on grazing lands than on agricultural lands. We attribute this in part to the incentive provided by the rental rate determination for agricultural lands, which is based on production. The formula for grazing leases does not appear to provide a similar incentive. We recommend DNRC:

- A. Review alternatives for establishing a grazing lease incentive for weed management.
- B. Make recommendations to the State Board of Land Commissioners and seek legislation as appropriate.

Monitoring Priority Weed Infestations

The Trust Land Management Division processes about 1,000 lease renewals each year. Leases are renewed every five or ten years depending on the term of the lease. Prior to renewal staff conduct assessments, including a forage inventory. When the department identifies a weed concern during renewal, staff can attach stipulations to the lease agreement requiring supplemental weed management. Stipulations and supplemental plans are used for five percent of the leases renewed each year.

Current Process Does Not Assure Priorities are Identified or Monitored

The current process allows for identification of noxious weed concerns on trust lands every five or ten years. According to district weed coordinators, infestations of existing or new noxious weeds can

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become well-established within five years. While the use of a standard lease weed clause, stipulations, and supplemental weed plans indicates DNRC recognizes the need for weed management, department officials do not have assurance they are managing the highest priority noxious weed concerns. To optimize the return to the school trust by reducing noxious weeds, we recommend DNRC:

- A. Identify significant noxious weed infestations on state lands.
- B. Monitor priority noxious weed infestations and weed management compliance.

Enforcement Alternatives

We noted a reliance on weed districts for enforcement of weed management requirements. If the lessee remains uncooperative, the expectation is the weed district will use its enforcement authority to resolve the problem. Currently, if a lessee does not manage weeds, the only alternative to weed district enforcement is to invoke the lease cancellation clause. Staff expressed reluctance to use the lease cancellation authority, because many state parcels are inaccessible, except through the current lessee's property. Lease cancellation can make access for weed control by DNRC staff or a new lessee difficult.

Department Enforcement Alternatives are Needed

The state is responsible for optimizing the trust. Therefore, monitoring weed management compliance, which impacts trust revenue, should not be left to weed districts. To improve noxious weed control and optimize return to the trust, we recommend DNRC:

- A. Verify weed management compliance on leased parcels.
- B. Evaluate alternatives for enforcement of noxious weed management requirements.
- C. Make proposals to the State Board of Land Commissioners as appropriate.

DNRC Responsibility for Weed Management

Officials indicated the approach to stewardship is based on two principles. First, if the cause of degradation of state lands (not limited to weeds) is other than the current lessee, then the agency attempts to assist with corrective action. Second, because the

formula includes a deduction for weed control, DNRC is reluctant to provide assistance.

Weed Project Involvement

Some district weed coordinator comments acknowledged DNRC involvement in weed control projects on leased lands and department contributions to local cooperative projects. Most however, reflected minimal DNRC involvement. In our survey of lessees, we asked lessees to describe DNRC involvement in weed management on leased trust lands. Respondents indicated DNRC:

- ▶ Assists with inventory/mapping -- 14 percent
- ▶ Assists with weed management plan -- 3 percent
- ▶ Assists with weed control -- 9 percent
- ▶ Does not provide assistance -- 74 percent

DNRC Weed Management Funding

Department noxious weed management funding for fiscal year 2002 included:

- ▶ \$31,000 from the resource development account to be used by the DNRC's Trust Land Management Division.
- ▶ \$5,000 designated for weed management from the recreational use account.
- ▶ Approximately \$90,000 expended by the Forest Management Bureau for noxious weed management on timber lands.
- ▶ A portion of staff time (5 to 15 percent) at land/field offices used for noxious weed management (assessment, spraying herbicides, bio-controls, etc).

Department Weed Management Priorities

The DNRC approach does not necessarily identify weed priorities for trust lands, whether leased, un-leased, agriculture, grazing, or timber. The approach relies on lessees for weed management. Therefore, DNRC does not request weed management funding based on state-wide priorities. Officials use the amount approved in previous years as the basis for succeeding budget requests. The department should establish a more formal process

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recognizing a level of responsibility for participation in weed management on trust lands. We recommend DNRC:

- A. Identify land/unit office weed management projects warranting involvement by the department.
- B. Consolidate DNRC weed management projects and develop budget proposals for executive and legislative consideration.

Chapter I - Introduction

Introduction

At the request of the Legislative Audit Committee (LAC), the Legislative Audit Division conducted a limited scope performance audit of noxious weed management activities on state lands. In May 2001, the LAC received a letter signed by over 100 Montana legislators requesting the performance audit. This letter also requested an “on-the-ground” evaluation of tracts of trust lands and a comparison of the weed control activities of the Department of Natural Resources and Conservation (DNRC) to other state agencies.

In June 1997, we issued a performance audit report about the state’s Noxious Weed Program (96P-13). The audit addressed:

- ▶ Noxious Weed Trust Fund administration by the Montana Department of Agriculture (MDA).
- ▶ Right-of-way weed control funding for the Montana Department of Transportation (MDT).
- ▶ County weed management practices.

During the 1997 audit, we did not examine the implementation of section 7-22-2151, MCA, enacted by HB 395 during the 1995 legislative session. Since the law was recently enacted, there was little activity. This statute requires state agencies administering land within a weed district (county) to enter into agreements with district weed boards to specify mutual responsibilities for noxious weed control on state lands. Five state agencies are identified in the law:

- ▶ Department of Natural Resources and Conservation.
- ▶ Montana Department of Transportation.
- ▶ Department of Fish, Wildlife and Parks (FWP).
- ▶ Department of Corrections (DOC).
- ▶ The University System.

Audit Objectives

We developed four audit objectives:

- ▶ Determine if state agencies are in compliance with section 7-22-2151, MCA.

Chapter I - Introduction

- ▶ Determine if biennial reporting includes an assessment of state agency noxious weed management effectiveness.
- ▶ Determine how DNRC noxious weed management compares to other state agencies.
- ▶ Assess noxious weeds on trust lands and identify DNRC weed management responsibilities.

Scope

We examined noxious weed management activities in five state agencies focusing on weed control conducted in the last two years. The primary agencies are DNRC, MDT, and FWP. DOC and University System lands, although limited in terms of total state lands acreage, were also reviewed. In addition, we included the following:

- ▶ Assessment of noxious weeds on a sample of state lands parcels.
- ▶ Survey of lessees regarding weed control on leased state lands.
- ▶ County weed coordinator comments regarding compliance with weed control requirements related to state agencies.

Audit Methodologies

We reviewed applicable Montana laws; Administrative Rules of Montana; available budget, funding, and expenditure documentation; and the Montana Weed Management Plan to obtain an understanding of weed management requirements and accomplishments.

We interviewed:

- ▶ State agency central office and regional/district/field points of contact from DNRC, FWP, MDT, DOC, and the University System to discuss compliance with section 7-22-2151, MCA, pertaining to written agreements between counties and state agencies, six-year noxious weed control plans, and biennial noxious weed reports.
- ▶ The MDA state weed coordinator to determine availability of six-year weed control plans, cooperative agreements, and biennial reports. We also discussed the use of biennial reports and the intent of the statutory requirement for reporting.

- ▶ A sample of 25 district (county) weed coordinators to evaluate compliance with the law regarding six-year noxious weed control plans, cooperative agreements with state agencies, and biennial reports.

We also interviewed DNRC officials to:

- ▶ Examine the effect of noxious weeds on the process used by DNRC to determine lease rates for agricultural and grazing lands.
- ▶ Determine how the department assesses and monitors noxious weed infestations on both leased and non-leased state trust lands.
- ▶ Determine how the department verifies lessee compliance with noxious weed control requirements.
- ▶ Identify current availability and uses of noxious weed control funding.

We solicited written comments from seven public lands-related organizations to provide additional perspective of state lands users regarding noxious weed control. We arranged for county weed coordinators to help us assess a random sample of 119 parcels of trust lands in 20 counties across the state to rate the percent of total vegetation attributed to noxious weeds. We surveyed a random sample of 154 state trust lands lessees selected from the most recent fiscal year listing of lease renewals to determine leaseholder views regarding noxious weeds on state lands and DNRC weed control activities.

Compliance

We examined state agency compliance with section 7-22-2151, MCA, requiring written agreements. We found the five state agencies identified in the law were generally in compliance with these regulatory requirements. However, we found the biennial reports submitted to MDA did not assess weed management success as required by the law. This issue is discussed in chapter III.

Chapter I - Introduction

Report Organization

The remainder of this report is organized as follows:

- ▶ Chapter II, Background. Provides information about state agency weed management activities and section 7-22-2151, MCA, regarding written agreements between state agencies and weed districts.
- ▶ Chapter III, Assessing Noxious Weed Management Effectiveness. Provides a recommendation to improve the biennial reporting process by developing a consolidated report for assessing weed management effectiveness.
- ▶ Chapter IV, Noxious Weed Control on Trust Lands. Provides recommendations to DNRC regarding improvements for noxious weed control, including rental incentives, infestation monitoring, enforcement options, and prioritization.

Chapter II - Background

Introduction

Section 7-22-2109, MCA, requires county weed boards to establish criteria for the management of noxious weeds on all land within the weed district. Section 7-22-2151, MCA, requires written agreements between county weed districts and state agencies to specify mutual responsibilities for noxious weed control on state lands. The majority of state lands are designated as school trust lands. Revenue generated from leasing for grazing, agriculture, minerals and forest harvests on state lands is used to support schools funding across the state. In this chapter, we provide background regarding how agencies and weed districts implement noxious weed management plans on state lands.

Section 7-22-2101(8), MCA, defines noxious weeds as exotic plant species introduced in the state that may render land unfit for agriculture, forestry, livestock, wildlife, or other beneficial uses. In addition, section 7-22-2116, MCA, states it is unlawful for any person to permit any noxious weeds to propagate or go to seed. Section 7-22-2101, MCA, defines a person to include state government agencies.

State Lands

For noxious weed control on state lands, we considered the following agency administrative responsibilities:

- ▶ Department of Natural Resources and Conservation (DNRC) – Over 5.1 million acres of school trust lands are used for agriculture, grazing, and timber harvests. Approximately 4.9 million acres are leased for crop and rangeland uses. The department also administers 19,000 acres of state water project lands.
- ▶ Montana Department of Transportation (MDT) – 14,000 miles of federal, state and county road right-of-way.
- ▶ Department of Fish, Wildlife, and Parks (FWP) – over 400,000 acres (fishing access sites, parks, and wildlife management areas).
- ▶ Department of Corrections (DOC) – 37,000 acres (primarily prison ranch).

Chapter II - Background

► The University System:

- o University of Montana (UM) – 32,000 acres (Missoula area, Lubrecht Forest, and Bandy ranch).
- o Montana State University (MSU) – 37,000 acres (primarily agricultural experiment stations/ranches).

State Agency Comparison

The Montana Weed Management Plan, dated January 2001, provides a summary of noxious weed control budgets for state agencies. The information in the plan was based on fiscal year 1998-99 budgets. To better understand the level of the weed control effort of these five state agencies, we also examined the expenditure information reported in 2000-01 to the Montana Department of Agriculture (MDA) state weed coordinator (Table 1).

Table 1
State Agency Noxious Weed Control Expenditures

Agency	2000-01 Biennium Expenditures
MDT Right-of-Way	\$1.7 million
DNRC Trust Lands	\$44,633
DNRC Water Projects	\$17,225
FWP	\$339,831
DOC	\$25,068
University System	Not Available

Source: Compiled by LAD from Department of Agriculture records.

We found using agency weed expenditures to obtain a cost per acre for each agency is not a reliable estimate of agency level of effort. The agencies approach noxious weed management in different ways. Differences between agencies make such calculation a matter of comparing apples to oranges.

DNRC

DNRC relies on lessees for the majority of weed control on leased agricultural and grazing lands. As a result, the lessee bears most of the cost and the department commits only limited funding to weed

Chapter II - Background

control projects primarily on un-leased lands. Funding is used for herbicide purchase and application by DNRC staff, county control, or contractor support. DNRC has not established a centralized noxious weed management staff position. The Agriculture and Grazing Land Bureau supervisor assumes the administrative responsibility for noxious weed management on most leased lands. Staff allocates available weed control funding and assist with six-year plans/agreements and compilation of a biennial report required by section 7-22-2151, MCA. Noxious weed management on timber lands is administered by the Forest Management Bureau. In addition, Water Resources Division staff serve as a centralized contact for state water project lands.

MDT

MDT relies on county weed control capabilities (and in a few jurisdictions contractors). The department allocates highway funding to MDT maintenance districts for weed control on road right-of-way. Based on annual reviews of requirements, MDT maintenance districts allocate available funding to county weed boards. MDT received funding for a centralized weed control staff position during the 2001 legislative session. Staff focus on development of six-year plans, annual agreements to allocate available funding to counties, and compilation of the agency biennial report.

FWP

FWP relies on county resources, contractors, and/or in-house capability. Regional officials determine the appropriate weed management alternative based on consideration of the site and available department and local resources. Regions use different approaches for weed management. For example, one region could rely on county capability for fishing access sites, contractors for parks, and in-house capability for wildlife management areas. FWP also received funding for a centralized weed control staff position during the 2001 session. Staff works with regional offices on identification of weed management funding sources, weed control activities, six-year plans, cooperative agreements, and biennial reports.

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DOC

DOC weed control is based on the agricultural needs of the Montana State Prison Ranch. The majority of weed management is conducted in-house. Aerial spraying is contracted. The ranch manager is responsible for weed management.

University System

The University System uses a combination of in-house, county, and contractor resources for weed control activities. Procedures vary depending on the availability of in-house staff, county capabilities, or local contractors. The University System has not established a centralized position. UM established a part-time weed coordinator to address development and implementation of six-year plans for Mount Sentinel and Fort Missoula properties. MSU established a contact point for submission of biennial reports in Bozeman. Individual MSU agricultural experiment station managers are responsible for implementation of weed management plans.

Various Approaches to Agency Weed Management

These operational variations result in different approaches to noxious weed management among state agencies. MDT, FWP, and DNRC provide examples of differences in approaches used.

- ▶ MDT allocation of right-of-way weed control funding to weed districts has provided for an on-going capability to manage noxious weeds. Recent efforts by MDT to refine the management concept along right-of-way in Missoula County reflect an approach based on establishing a desired type of vegetation rather than simply eradicating noxious weeds, primarily through herbicide spraying. The new approach outlines the use of limited funding resources for aspects of weed management in addition to spraying, including education, inventory, rehabilitation, and prevention. Under this concept, 15 feet of highway shoulder will be sprayed for various noxious weeds. Weed management from the 15-foot point to the fence line will depend on what the landowner on the other side of the fence is doing. If the landowner is actively controlling weeds, right-of-way funding will also be used to control weeds all the way to the fence. If not, the state-county obligation will end at the 15-foot boundary, allowing limited resources to be directed to other more productive uses. MDT is in the process of expanding this approach to additional counties across the state.
- ▶ FWP six-year plans refer to specific parks, fishing access sites (FAS), or wildlife management areas (WMA). For most parks

and FAS locations, weed problems are geographically defined in terms of fence-line, road, or water boundaries. Staff recognizes the impact of vehicle traffic in these locations and expects noxious weed control will be an on-going annual requirement. Historic weed control budgets and ancillary maintenance funding contribute to noxious weed control activities in these locations. For WMAs, the noxious weed problem may be less defined because of the larger acreage, but again historic funding and focus on identified priorities within WMA boundaries appears to provide for an on-going weed management effort.

- ▶ DNRC's approach is considerably different from both MDT and FWP because the department relies on lessees for weed control. We discuss DNRC weed control activities on leased and un-leased state lands in detail in Chapter IV.

As a result of these operational differences, we decided a direct comparison of state agency weed control activities was not practical. Therefore, we focused on the requirements of section 7-22-2151, MCA, regarding written agreements and six-year plans.

Written Agreements and Six-Year Plans are Required

According to law, cooperative agreements between state agencies and weed districts should include the following:

- ▶ Six-year integrated noxious weed management plan.
- ▶ Noxious weed management goals statement.
- ▶ Plan of operations for the biennium, including budget.
- ▶ A biennial performance report from the local weed board to the MDA state weed coordinator addressing the success of the plan.

We found written agreements and six-year plans were in place for all five agencies. Local district weed coordinators were aware of the agreements and copies of most six-year plans were available. For some agencies, six-year plans address all counties within the region. In other cases, the plans are specific for each county. The focus of most plans was to describe general responsibilities for state lands sites/parcels such as "cooperating on an integrated approach to noxious weed management." The result is many of the initial six-year plans are generic in nature.

Chapter II - Background

Conclusion: Agencies are in Compliance with Written Agreement and Six-Year Plan Requirements

We found all agencies were generally in compliance with the requirements of the law. Written agreements were in place, although we noted differences such as preparation of a single document for a combination six-year plan and cooperative agreement with the weed district. Other agencies prepared two separate documents. Most six-year plans included a goals statement and made reference to budget requirements.

Communication and Coordination is Important

We found the consensus among agency staff and district weed coordinators was that section 7-22-2151, MCA, is important in establishing a cooperative relationship between state agencies and county officials. Agency staff and county weed coordinators described the most effective weed control operations as those with an agreed-upon weed management plan. We noted these site-specific plans could either be part of the written six-year plan, a separate management plan, or simply a verbal agreement between cooperative participants. These participants all indicated weed management effectiveness could be achieved using any of these three approaches. Agency-weed district communication and coordination, brought about at least in part by the requirements of section 7-22-2151, MCA, were the common threads.

Chapter III - Assessing Noxious Weed Management Effectiveness

Introduction

Montana law establishes two noxious weed reporting requirements involving state lands. According to the law, written agreements between state agencies and weed districts should include a requirement for submission of a biennial performance report from the weed board to the Montana Department of Agriculture (MDA) state weed coordinator. The purpose of the report is to address the success of the six-year plans. In addition, each of the five state agencies listed in the law is required to submit a statement or summary of weed actions to the state weed coordinator. In this chapter, we discuss contents of the current reports and provide a recommendation for improvement.

Biennial Weed District Reports

During the audit, we interviewed 25 district weed coordinators as well as state agency representatives (central office officials and field staff) in all five agencies identified in the law. One of our purposes was to discuss compliance with, and the effectiveness of, the biennial report requirements of section 7-22-2151, MCA. We also met with the MDA state weed coordinator to discuss statutory requirements.

Biennial Report Content

The law requires weed boards to submit a biennial performance report to MDA, on a form provided by the state weed coordinator, regarding the success of the six-year plan. The state weed coordinator, in cooperation with several district weed coordinators, developed the content and format currently used by all counties submitting biennial reports. The current biennial report includes weed district comments in five categories:

1. Type of state lands in the county (MDT, FWP, DNRC, etc).
2. Whether or not a six-year plan is in place.
3. Program completion (status of six-year plan requirements).
4. Problems associated with state agency-weed district coordination.

Chapter III - Assessing Noxious Weed Management Effectiveness

5. Accomplishment of weed control work (county, agency, or contractor).

We reviewed the file maintained by the state weed coordinator for reports compiled for the 2000-01 biennium. The file included 53 of 56 weed board biennial reports. Since categories three and four provide for completion status and problems, these sections could be used to provide an indication of performance or a measure of plan success. For category three, our review reflected 88 percent of the responses were either blank or indicated “on-going or yes.” The responses did not provide a performance or success measure. For category four, 68 percent of the responses were either blank or indicated “none.” Of the remainder, we noted only seven weed districts provided descriptions of site-specific weed control problems. Other weed districts provided generic responses such as poor communication, no contact, or inadequate funding.

Reports are not Used

The state weed coordinator indicated the weed district biennial reports are filed upon receipt. There is no attempt to consolidate biennial weed district reports or to generate a statewide assessment. Department officials indicated the law does not provide MDA with a directive to compile a statewide report. As a result, weed district biennial reports are not used by officials at the local or state level.

State Agency Statements or Summaries of Weed Actions

In addition to weed district biennial reports, state weed coordinator files included the state agency reports also required by statute. Files included reports from DNRC, DOC, FWP, MDT, and the Department of Public Health and Human Services (PHHS). Although PHHS is not required by law to report, the state weed coordinator solicited comments because the agency is responsible for state lands at various institutions across the state. Reports were not available for the University of Montana (UM) or Montana State University (MSU). Officials from both university organizations indicated confusion regarding when to submit reports, because the law does not specify timing criteria. In addition, the state weed coordinator indicated there was confusion regarding the points of contact for the two university organizations. As a result of these problems, the 2000-01 reports were not compiled for UM or MSU.

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Agency Statement or Summary Content

The content for the state agency reports reflects:

- ▶ Management plan status (by county),
- ▶ Major goals for weed control, and
- ▶ Agency expenditure and budget information.

We reviewed the state agency reports submitted for 2000-01.

Under management plan status, the primary responses were “current, in-place, or complete.” In a few instances, sites/parcels were noted and the specific weed infestation was identified. Major goals were stated in generic terms such as “continue to monitor and treat, control or reduce weeds, and contain established infestations.”

Agency expenditure information reflected the past biennium and budget information was provided for the succeeding biennium.

Agency officials indicated these reports are of limited use to management, except to provide an expenditure/budget summary for weed control.

Conclusion: Current Reports do not Assess Weed Management Effectiveness

We do not believe biennial weed district or state agency reports provide for an assessment of success or an evaluation of effectiveness. We also interpret statutory intent to require a report useable at both the local and state level to improve weed management.

During our visits to weed districts, weed coordinators and agency staff referred to a series of four steps for weed management: assessment to determine status, action to implement weed controls, monitoring to track progress, and re-assessment to determine management effectiveness. Weed coordinators described assessment and re-assessment as critical elements of the weed management process used to identify priorities and to establish alternatives for available resources.

A consolidated report reflecting an assessment of weed management effectiveness on state lands in Montana counties could be useful to

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the Legislature and the executive branch. Given the interest expressed by legislators during the 2001 Legislative session when over 100 legislators requested a performance audit, it appears a consolidated report could be helpful when establishing priorities and determining agencies' operating budgets. Currently, legislators are not provided any statewide noxious weed information. We believe the intent of the reporting requirements was to advise administrators, legislators, and the public regarding the extent of weed problems and how the weed district-state agency relationship is progressing. In addition, legislators should be provided with information on program success and include identification of areas of the state requiring more assistance.

How Can the Reporting Process be Improved?

In Chapter II, we concluded the level of communication and coordination between state agencies and weed districts improved as a result of section 7-22-2151, MCA, requirements. An improved reporting process could be used to continue the emphasis on communication and coordination between weed districts and state agencies. To create an assessment of success or an evaluation of effectiveness and to provide useful information on noxious weeds on state lands, three improvements are needed:

- ▶ Combine the two reports currently required, weed district biennial reports and state agency summaries, into a single report reflecting each agency's state lands within a weed district.
- ▶ The single report should provide for an indication of success on each agency's lands within the district. We noted one agency developed a simple format indicating whether noxious weeds were increasing, decreasing, or stable. This type of criteria could be used initially to establish a baseline for reporting on all state lands.
- ▶ The single district/agency reports should be compiled into a consolidated statewide report made available to the legislature and the governor.

The district weed board should be designated as the focal point for preparation and submission of biennial reports. State agencies should be responsible for providing information to and coordinating

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Montana Department of Agriculture Role for Achieving Improvements

with the local weed boards prior to report submission. We believe agency coordination on the weed district report would meet the intent of section 7-22-2151, MCA, requiring submissions by both the weed district and each state agency. Although we noted instances of coordination between state agency staff and weed district officials, coordination was not consistent.

The law requires submission of reports to MDA. MDA should not be solely responsible for developing a state lands noxious weed management assessment report acceptable to 56 weed districts and multiple state agencies. Since Montana law places responsibility for weed control at the local level, local officials should be involved in a determination of report format and content. However, to establish report content considered useful to all participants, MDA should take the lead and work with weed district officials and state agency representatives. This group should be charged with formalizing acceptable report format and content.

MDA's role should be two-fold:

- ▶ Coordinate the development of criteria for noxious weed baseline and status reporting, as well as report format. MDA responsibility in this regard is based on the existing statute, because section 7-22-2151(1)(d), MCA, already requires the department to provide the biennial report form. In addition, section 80-7-711(2), MCA, authorizes the department to provide technical assistance, including information and data on the location of noxious weed infestations in each county. This authority allows the department to work with weed districts and state agencies to establish noxious weed status criteria.
- ▶ Consolidate reports received from weed districts and prepare a state level report. Section 80-7-713, MCA, authorizes MDA to prepare and submit a biennial noxious plant status report to the legislature and governor. This authority should be used to provide a statewide weed district-state agency assessment of weed management effectiveness on state lands to the legislature and governor.

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Recommendation #1

We recommend the Montana Department of Agriculture:

- A. Develop biennial report criteria and format to assess the status of noxious weeds on state lands in each county.**
- B. Establish procedures for joint weed district and state agency report preparation, coordination, and submission.**
- C. Consolidate weed district biennial and agency reports into a statewide state lands noxious weed report for submission to the legislature and governor.**

Chapter IV - Noxious Weed Control on Trust Lands

Introduction

The Department of Natural Resources and Conservation (DNRC) is responsible for administering 5.1 million acres of agricultural, grazing, and timber school trust lands. In this chapter, we discuss the approach used by the department to address noxious weeds on state lands. In addition, we provide recommendations for improving noxious weed management on trust lands.

Montana Law Outlines Trust Lands Responsibilities

We reviewed Montana law to identify responsibilities regarding stewardship of state trust lands. We found the following references generally applicable to this topic:

- ▶ Section 77-6-101, MCA, provides policy indicating it is in the interest of the state to achieve a sustained income from trust lands.
- ▶ Section 77-1-202, MCA, assigns the State Board of Land Commissioners responsibility for administering trust lands to secure the largest measure of legitimate and reasonable advantage to the state.
- ▶ Section 77-1-106, MCA, requires the State Board of Land Commissioners to establish rental rates that consider the long-term productivity of trust lands, while optimizing the return to the school trust.
- ▶ Section 77-1-301, MCA, assigns DNRC responsibility for leasing and managing trust lands.

Indications of Noxious Weeds on Trust Lands

The Montana Weed Management Plan, January 2001, indicates approximately 9 percent of state lands are infested with noxious weeds. Since “infested” is not defined in the plan, we assumed infestation meant “some level” of noxious weeds compared to total forage/vegetation. To develop an indicator of the level of infestation on trust lands, we accompanied district weed coordinators in 20 counties to 119 leased trust lands parcels selected randomly. We asked weed coordinators to rate the percent of noxious weeds visible on each parcel compared to total vegetation. Table 2 reflects the results of our assessment.

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Table 2
Audit Assessment of Visible Noxious Weeds on State Lands

Percent Parcels	Percent of Noxious Weeds Visible
43	0
36	1 to 9
16	10 to 24
2	25 to 49
3	50 to 100

Source: Compiled by the Legislative Audit Division.

Our assessment indicated for 57 percent of the parcels observed, the level of visible noxious weeds ranged from 1 percent to 100 percent. Based on our on-site discussions with district weed coordinators, infestation levels of 1 to 9 percent while warranting weed management probably do not detract much from available productive forage. If we assume a parcel is “infested” when noxious weed levels are 10 percent or more of the vegetation, then 21 percent of the parcels in our sample would be considered weed infested.

We also surveyed 154 agricultural and grazing lessees from all counties across the state selected from a listing of recent lease renewals. One of the survey questions asked lessees to indicate the level of infestation on their most recent state lease. Sixty-three percent responded noxious weeds accounted for less than ten percent of vegetation. Thirty-five percent indicated there were zero noxious weeds on their most recently leased parcels. The other two percent indicated infestation between ten and twenty-four percent.

In addition, we noted in some cases when the department identifies a noxious weed concern during the renewal assessment staff attach stipulations to the lease agreement requiring supplemental weed management plans. Stipulations and supplemental plans are used for approximately 5 percent of the 1000 leases renewed each year.

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The results of our parcel assessments made by district weed coordinators do not correspond to the results of the lessee survey. Our parcel assessment sample was selected using available state and county road access. For most parcels, our observation of state land was conducted near the right-of-way adjoining the state land to limit the need to cross private property. As a result, we recognize our assessment results are influenced by the impact of roads on noxious weeds. Similarly for the lessee survey, we assumed lessees would generally respond positively regarding weed control on recent lease renewals. Therefore, it is difficult to directly compare results from either the parcel assessment or lessee survey to the nine percent “infested” figure in the Montana Weed Management Plan. While the state plan and the lessee survey indicate the extent of infestation is equal to or less than 9 percent, the results of the parcel assessment suggest the extent of infestation on state lands is higher.

Conclusion: Infestation on State Lands could be Higher than 9 Percent

The assessment of 119 randomly selected parcels identified the level of noxious weeds infestation visible from a single point. Using this assessment indicator, we conclude noxious weed infestation on state lands could be higher than the 9 percent figure identified in the state management plan.

According to district weed coordinators assisting with our assessment, noxious weed growth replaces more productive forage or vegetation. Therefore, noxious weeds on state lands reduce productive capacity and directly impact school trust revenues. To illustrate this point, we prepared the examples in Table 3 below to show the potential impact of weed infestations on trust lands.

Potential Impact of Noxious Weeds

In our examples, we selected a parcel infestation level of 10 percent, which was the level district weed coordinators indicated noxious weeds began to impact productive forage. Department officials have identified a carrying capacity of approximately 1,090,000 animal unit months (AUM) for the 4.3 million acres of grazing lands, or an average of .25 AUM/acre. An AUM represents the amount of natural forage necessary for the subsistence of one animal unit for one month. Animal units are identified as one cow, one horse, five

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sheep, or five goats. A 10 percent parcel infestation level reduces AUMs by .025/acre. Multiplying projected infested acres times this AUM reduction factor establishes the potential number of AUMs lost due to noxious weeds. To determine potential lost revenue, the final step is to multiply lost AUMs times the current lease rate of \$6.20/AUM. Figure 3 reflects the potential lost revenue to the school trust account using the following three noxious weed infestation indicators:

- ▶ Five percent infestation. Based on the number of weed management stipulations developed during the department lease renewal process.
- ▶ Nine percent infestation. Based on the figure presented in the State Weed Management Plan.
- ▶ Twenty-one percent infestation. Based on the indicator developed during our audit state lands assessments.

By multiplying a percent of infested state lands times total grazing lands acreage, we use these three indicators to project infested acres and potential lost AUMs and revenue.

Table 3
Impact of a 10 Percent Noxious Weed Infestation Level on School Trust Revenue

Percent Infested Acres	Projected Infested Acres	Potential Lost AUMs	Potential Lost Revenue
5%	215,000	5,375	\$33,325
9%	387,000	9,675	\$59,985
21%	903,000	22,575	\$139,965

Source: Compiled by the Legislative Audit Division

**Basis of Audit
Recommendations is
Improving Trust Revenue**

If the percent of infested parcels increases and/or the level of infestation on individual parcels is allowed to increase, then fewer AUMs are produced and less revenue is available to the trust. If infested parcels and/or the level of infestation can be reduced, AUMs

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and trust revenue will increase. According to section 77-1-106, MCA, lease rental rates and fees should be established while considering the best interests of the state with regard to the long-term productivity of the school trust lands, while optimizing the return to the school trust.

In the following sections, we present four recommendations related to DNRC noxious weed control activities on trust lands. The intent of these recommendations is to improve noxious weed management because of the direct impact on trust revenue. The four recommendations include:

- ▶ Review alternatives for establishing a grazing lease rental incentives for noxious weed management.
- ▶ Identify noxious weed infestations and establish a process for monitoring priorities.
- ▶ Establish enforcement options such as increasing interim lease rates.
- ▶ Identify weed management projects warranting DNRC involvement.

Alternatives for Grazing Lease Incentive

Historically, the department has relied on lessees for noxious weed control on leased state parcels. Department officials indicated the basis for lessee responsibility is Montana law and Administrative Rules of Montana (ARM). According to section 7-22-2149, MCA, if a county weed district conducts noxious weed control on leased state lands, the lessee is responsible for paying the bill. Section 36.25.132, ARM, states the lessee shall keep the land free of noxious weeds at their own cost.

The conditions of the lease agreement designate the lessee responsible for weed control. We believe this contractual agreement is important, because it not only designates the lessee responsible for weed control, but also implies the department is responsible for oversight. Since the department relies on lessees for noxious weed

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control on state lands, we examined whether current lease incentives are effective in promoting weed management.

Agricultural Leases

The law establishes agricultural lease rates based on a crop share rental basis of not less than 25 percent to the state. During the audit, we interviewed 25 county weed coordinators, as well as agency staff, and found consensus was agricultural leases provide a more direct incentive for lessees to manage weeds. By improving land productivity through aggressive weed management, both the lessee and the state benefit. However, according to department officials, the decision process used by lessees of agricultural lands probably focuses more on production concerns and controlling nuisance weeds, such as wild oats, because noxious weeds are less prevalent on agricultural lands. Any affect on noxious weeds, though positive, may be a secondary consideration.

The results of our state lands assessments indicated of 119 parcels rated, 32 were agricultural leases. The rating for 25 of the agricultural parcels (78 percent) was zero visible noxious weeds. The remaining seven parcels rated less than ten percent of the vegetation as noxious weeds. Our sample supports an expectation of fewer noxious weeds on agricultural leases.

Grazing Leases

Our parcel assessment ratings for grazing leases, on the other hand, indicated up to 26 percent could be infested with a level of noxious weeds accounting for 10 percent or more of the vegetation. Lease rates for grazing lands are based partly on the department's lease renewal assessment of each parcel's AUM carrying capacity. The State Board of Land Commissioners is responsible for establishing an annual grazing lease rate. The rate is determined by multiplying a factor times the average price per pound of beef for the previous year, then times the AUM carrying capacity to determine the lease rate. The method for establishing the multiplier factor used by the Board was developed in 1993. The formula starts with the average price for private leases per AUM (\$11.40). The formula includes six categories of deductions: weed control, fencing, water developments, non-use areas, access, and fire suppression.

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Deductions are subtracted from the average private lease rate per AUM and according to staff, are intended to recognize lessee costs. There are also two additions in the formula: length of lease and preference right. Additions are added to the average rate and are intended to reflect the benefits of a state lease.

For calendar year 2001, the Board established a 7.54 multiplier. The multiplier times the average price of beef for calendar year 2000 equates to an AUM rental rate of \$5.55. Using the calendar year 2001 average price per pound of beef, the calendar year 2002 AUM rental rate is \$6.20.

Does Weed Control Deduction Provide an Effective Incentive?

The formula deduction for weed control is \$2.92 per AUM. This does not represent a direct reduction from the average private rental rate/AUM because of the impact of the average price of beef on the formula. For example for 2001, the average price per pound of beef was about \$.84. Therefore, the actual weed control deduction from the market rate is approximately \$2.45/AUM (\$.84 x \$2.92). Department lease renewal assessments established an annual AUM total of 1,090,000 for the 4.3 million grazing and timber acres. Multiplying the weed deduction times the total number of AUMs suggests lessees receive a potential credit of approximately \$2,670,500 per year for weed control.

This potential weed deduction credit can be examined in two ways:

- ▶ First, the potential credit (\$2.67 million) could be applied to the total 4.3 million acres of grazing lands. This amounts to about \$.60/acre for weed control. Discussion with county weed coordinators indicates a realistic minimum cost for herbicide spraying is close to \$20.00 an acre.
- ▶ Second, the potential weed control credit (\$2.67 million) could be applied only to infested acreage. If infestation is based on the nine percent figure cited in the Montana Weed Management Plan, then infested acreage is approximately 387,000 acres and the credit for weed control is about \$6.90/acre.

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The dilemma is the weed deduction is applied to all lessees, whether or not there is a level of noxious weed infestation on their lease parcels. As a result, the total potential credit cannot be used just for infested parcels. Regardless of the way the credit is applied in theory, neither \$.60/acre nor \$6.90/acre per year provides much incentive for weed management if costs are closer to \$20/acre. However, \$20.00/acre costs are attributed to the more expensive herbicides which are usually not applied annually.

As mentioned earlier, we conducted a survey of 154 agricultural and grazing lessees from all counties across the state. Of the lessees surveyed, 87 percent recently renewed grazing leases or a combination of agricultural and grazing leases. The survey included a question regarding the adequacy of the weed deduction. There were three responses:

- ▶ The weed deduction adequately covered weed control costs on leased land -- 10 percent.
- ▶ The weed deduction did not cover costs -- 11 percent.
- ▶ No opinion, because the lessee was not familiar with the deduction and the formula -- 79 percent.

It appears the grazing lease weed control deduction is not viewed by lessees as an incentive because the majority of lessees were not familiar with the deduction and/or the formula. Some district weed coordinators indicated the approach used for determining grazing leases actually provides a disincentive for noxious weed control. For example, if the lessee invests in weed control and improves the AUM value, the lease rate could increase. According to department officials, there is an incentive side to this story as well. While the lease rate could and does increase as a result of motivated lessees, total forage also increases, and land productivity improves.

Establish an Incentive for Noxious Weed Control

The results of our state lands assessment survey indicate noxious weeds are a more significant problem on grazing lands than on agricultural lands. We attribute this in part to the incentive provided

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by the rental rate determination for agricultural lands. The department should review alternatives for improving the incentive to lessees for noxious weed control on grazing lands. The department could consider the following alternatives:

- ▶ Revise the grazing lease formula to account for differences in noxious weed infestations by providing a range of deductions depending on the renewal assessment. A higher deduction could be used to reward responsible lessees with few or zero weeds. The intent of this type of proposal would be to provide an incentive to maintain a weed free environment.
- ▶ Delete the current weed deduction from the formula, and the department retains the difference between the current formula and the revision (the amount of the current weed deduction). The department could use these funds to provide cost-share reimbursement for weed control to qualifying lessees. The intent of this type of proposal would be to provide an incentive to encourage lessees with active infestations to participate in weed management.
- ▶ Use a market-based formula and provide for annual discounts (during the five to ten year period of the lease) for documented noxious weed management expenditures. The intent of this type of proposal would be to reward demonstrated weed management by lessees.

In considering these and other possible alternatives, the department should evaluate administrative costs associated with implementation. While some re-prioritization of resources is always possible, any proposal examined as part of this recommendation should minimize department administrative requirements.

Following a determination of acceptable alternatives, the department should make recommendations to the State Board of Land Commissioners or seek legislation as appropriate. Section 77-6-507, MCA, requires the State Board of Land Commissioners to establish the annual rate for grazing lands. Therefore, any recommendation to improve incentive by revising the grazing lease formula will require Board approval and potentially legislation.

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DNRC Concerned about Administrative Costs and Equity

Department officials expressed concern about the amount of administrative support required to implement an incentive alternative. To assure any alternative is applied equitably, staff anticipate considerable information will need to be collected, compiled, and retained. These efforts would add to administrative costs.

Recommendation #2

We recommend DNRC:

- A. Review alternatives for establishing a grazing lease rental incentive for noxious weed management.**
- B. Make recommendations to the State Board of Land Commissioners and seek legislation as appropriate.**

Monitoring Weed Infestations

The Trust Land Management Division processes about 1000 lease renewals each year. Leases are renewed every five or ten years depending on the period of the lease. During the year prior to renewal, department staff conduct trust land assessments. The law requires assessments to take into consideration an inventory of forage resources, including the kind, type, and location of vegetation. According to staff, this includes noxious weeds. The inventory process is used by the department to establish the AUM carrying capacity and ultimately to compute the lease rate. The standard lease agreement includes a noxious weed clause indicating the lessee agrees at his own expense and cost to keep the land free from noxious weeds.

Current Process does not Assure Priorities are Identified or Monitored

The process used for lease renewal to identify noxious weed concerns on trust lands only allows for an assessment every five or ten years. According to district weed coordinators, infestations of existing or new noxious weeds can become well established within five years, significantly increasing management costs and impacting native forage.

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DNRC staff also advised when noxious weed infestations are identified during their assessments and lease stipulations or supplemental plans are prepared, on-going verification of lessee compliance is rare. According to staff, the desire to conduct multiple on-site weed evaluations of these parcels during the short Montana growing season conflicts with other workload. In most instances even annual visits are not possible.

While the use of the standard lease weed clause, lease stipulations, and/or supplemental weed plans indicates DNRC recognizes the need for noxious weed management, department officials do not have assurance they are aware of, or managing, the highest priority noxious weed concerns on state lands. To comply with statutory requirements and to optimize the return to the school trust by reducing noxious weeds, the department should identify infestations and monitor weed management compliance.

DNRC Should Establish a Weed Management Process

A DNRC weed management process should include the following:

- ▶ Identifying significant noxious weed infestations.
- ▶ Ensuring a management plan is established for identified infestations.
- ▶ Monitoring compliance with a weed management plan.

This process does not have to incorporate 100 percent of all trust lands. The current lease renewal process already identifies many weed free parcels each year. A sampling technique or a procedure building on the identification of infested areas recorded during the renewal assessment process should meet the needs identified in this finding. Staff suggested using cooperative agreements with district weed coordinators to help identify significant infestations or to provide a level of monitoring on state lands could be a useful tool. In addition, staff suggested requiring lessees to provide noxious weed status reports, already used by some field offices, could be more widely incorporated as a monitoring tool.

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DNRC Supports the Need to Verify Compliance on the Highest Priorities

Department officials supported the need to identify and monitor significant weed infestations. However, because of current duties and workload of field staff, officials do not anticipate the capability to implement this recommendation except for the very highest priorities.

Recommendation #3

We recommend DNRC:

- A. Identify significant noxious weed infestations on state lands.**
- B. Monitor priority noxious weed infestations and weed management compliance.**

Weed Management Enforcement

During our discussions with DNRC field staff, we noted a reliance on weed district officials for enforcement of weed management requirements. For example, when supplemental weed management plans or stipulations are prepared, some staff forward copies to the district weed coordinator. The intent is to advise the weed coordinator regarding a noxious weed problem. Staff also provided examples of visits to lessees to address problems and discuss corrective action. However, if the lessee remains uncooperative, the expectation is the weed district will use its enforcement authority to resolve the problem.

Currently if a lessee does not manage weeds, the department's only alternative to weed district enforcement is to invoke the cancellation clause included in lease agreements. Staff expressed reluctance to use the lease cancellation authority, because many state parcels are inaccessible, except through the current lessee's private property. Lease cancellation can make access for weed control by department staff or a new lessee difficult.

Weed District Enforcement is not Consistent

When DNRC relies on enforcement by district weed boards, it can result in inconsistent enforcement of contract provisions. For example, our discussions with district weed coordinators regarding

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the enforcement process outlined in the law for weed control identified two approaches:

- ▶ Approach 1. The informal county policy is to pursue cooperation from landowners and lessees. The preference of the weed board is not to use the authority in the law, which allows county officials to enter private property, conduct weed management, and bill the landowner (or lessee) for the costs incurred.
- ▶ Approach 2. The preference of the weed board is to use the threat of strict compliance with the law. Weed coordinators are encouraged to formally identify noncompliance and implement the sequence of enforcement steps outlined in the law.

While the scope of our audit did not include an assessment of which approach prevails in most counties, we noted this inconsistency can impact compliance on leased state lands. When the department relies on enforcement by the weed board, and the county approach more closely resembles the first scenario, then the department's assurance of compliance on leased lands is questionable.

We also noted other factors can influence weed board willingness to enforce weed management on leased state lands:

- ▶ According to law, state lands are exempt from property taxes. As a result, counties do not receive revenue from leased lands for the mill levy assessed to provide support for noxious weed control. If a weed board is forced to establish workload priorities because there is more weed control to be accomplished than there is time or capability to accomplish it, some officials may choose to concentrate on property contributing to the revenue source.
- ▶ Trust lands are typically a small percentage of the total lands a county weed coordinator is responsible for monitoring. Overall, trust lands account for less than five percent of the total land in the state. As a result, most weed district officials are busy with the other ninety-five percent.

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weed management requirements. The state is responsible for optimizing income to the trust. Therefore, monitoring weed management compliance, which impacts trust revenue, should not be left to weed districts. As a result, to improve noxious weed control and optimize return to the school trust, the department should examine alternatives providing for routine verification and additional enforcement options. First, the department should establish procedures for staff verification of compliance on parcels identified with significant weed infestations or parcels warranting more frequent assessment. This part of the recommendation is similar to recommendation #3 in this report. If the department establishes the monitoring procedures included in recommendation #3, those procedures could be applied here as well.

Discussions with staff revealed additional enforcement options. Based on an assessment of lessee weed management activities, the department could establish procedures for interim lease rate increases or reduction of the current weed deduction included in the lease formula. This capability could allow the department to collect a higher rental rate until an identified noxious weed problem is resolved by the lessee. Resolution criteria should be consistent with county noxious weed law. In addition, this process could allow the department to retain funds received from a rate increase to conduct weed control on state lands. The approach would be similar to the way weed districts are authorized to enter private property for weed control and bill the landowner to cover costs. While we envision the increased rate enforcement option being used only for worst-case leased parcels, it provides the department with both another management tool and a funding source to help control noxious weeds.

Similar to recommendation #2, State Board of Land Commissioners approval is necessary to implement this recommendation. Section 77-1-209, MCA, allows the State Board of Land Commissioners to prescribe rules relating to the leasing of state lands. The law requires the Board to establish procedures for setting all fees and rental rates. Therefore, any recommendation to establish interim rate increases as

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a noxious weed enforcement option will require Board approval and development of administrative rules.

Department Agrees with Need for Enforcement Alternatives

The department indicated there is merit in the proposal to establish additional enforcement options to address weed management in specific situations. However, officials indicated staffing levels and other workload may limit their capability to monitor weed infestations on trust lands except in the worst cases.

Recommendation #4

We recommend DNRC:

- A. Verify weed management compliance on leased parcels.**
- B. Evaluate alternatives for enforcement of noxious weed management requirements including use of interim lease rate adjustments.**
- C. Make proposals to the State Board of Land Commissioners as appropriate.**

DNRC Responsibility for Weed Management

The department responded to the need to be involved in weed management on state lands by allowing interested staff to establish individual levels of expertise. Current department expertise was achieved on a “part-time and as time permits” basis. Although not available in every field office, an in-house core of noxious weed expertise was established at all levels throughout the organization (central office and land/unit offices). During our discussions with weed coordinators and field staff, we discussed the kinds of weed management activities undertaken by DNRC and the level and types of funding available and used. We summarized comments from district weed coordinators and department staff into three categories: stewardship, inventory/mapping, and DNRC involvement.

DNRC Trust Land Stewardship

There appeared to be consensus among weed coordinators that DNRC should share in leased land stewardship, because current

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lessees are not necessarily responsible for existing infestations. Infestation sources unrelated to the current lessee include: gravel pits, recreational use (vehicles), timber harvests, mining sites, rivers/streams/irrigation, etc. There was also consensus regarding the need for DNRC participation in cooperative projects (plan development), and the need to share in cooperative project funding where appropriate (cost-share).

Department officials indicated the agency approach to stewardship is based on two principles. First, if the cause of degradation of state lands (not limited to noxious weeds) is other than the current lessee, then the agency attempts to assist with corrective action and/or rehabilitation. Second, because the lease formula includes a deduction for weed control, the department is reluctant to provide additional assistance. The department believes the predominant responsibility for weed control rests with the lessee, because of the administrative rule criteria and the lease weed control clause.

Inventory and Mapping

DNRC assesses state lands prior to lease renewal and may or may not provide information compiled on noxious weeds to weed district officials. In some cases, DNRC staff arrange for district weed coordinators to conduct the noxious weed assessment on leased land for the department.

Officials indicated generally the department does not participate in county-sponsored weed mapping or inventory projects. DNRC staff assume lessees should be the more active participant, working directly with weed coordinators in support of the district weed management plan.

DNRC Weed Project Involvement

Some district weed coordinator comments acknowledged DNRC involvement in weed control projects on leased lands and department contributions to local cooperative projects. Most however, reflected minimal involvement and/or a lack of awareness of DNRC activities. In our survey of lessees, we asked lessees to describe DNRC involvement in weed management on leased trust lands. Respondents indicated DNRC:

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- ▶ Assists with inventory/mapping -- 14 percent
- ▶ Assists with weed management plans -- 3 percent
- ▶ Assists with weed control -- 9 percent
- ▶ Does not provide assistance -- 74 percent

Department officials indicated because of the weed control deduction in the lease formula, typically DNRC does not provide direct assistance. However, historically the department dedicates a portion (8 to 10 percent) of the resources development account funding for support of noxious weed projects on both leased and un-leased lands.

DNRC Weed Management Funding

Improving and Developing State Lands

The following sections describe DNRC funding for noxious weed management.

In fiscal year 2002, \$47,000 was budgeted from the resource development account to be used by the Trust Land Management Division. The purpose of this account is to provide funding to improve and develop state lands to increase future revenue. The law allows the State Board of Land Commissioners to set the amount up to a maximum of three percent of trust income for resource development. For fiscal year 2001, the total amount for resource development was \$540,360. The division spent approximately \$31,000 of the \$47,000 for weed projects. Most of these funds supported projects on un-leased lands identified by land/unit office staff. Officials indicated the use of a portion of this account for noxious weed control is a historic indication of department priorities. Depending on the priority of weed control in the future compared to other agency requirements, the allocation could change.

Noxious Weeds from Recreational Use

For the last fiscal year, \$5,000 was designated for noxious weed management from the recreational use account. The purpose of this account is to compensate lessees for damage or noxious weeds caused by recreational users of state lands. The revenue source is from a fund which receives \$1.50 from each state lands recreational

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use license sold. According to staff, for fiscal year 2001, this amounted to approximately \$47,000. Administrative rules require the department to designate a portion of this account for noxious weeds and for damages. Traditionally the agency designates \$5,000 each year for this purpose. The department did not receive applications for use of this money during the last fiscal year. According to district weed coordinators and department field staff, the perception is criteria for approval is too stringent and applications are not submitted.

Forest Management Improvements

Approximately \$90,000 was expended by the Forest Management Bureau for noxious weed management on timberlands. In addition, the bureau expended \$30,000 for re-vegetation and grass seeding associated with timber sales to provide both erosion control and weed control.

Staff Time Contributes to Weed Management

A portion of staff time at land/field offices is used for noxious weed management (inventory/assessment, spraying herbicides/contracts, bio-controls, etc). The department does not specifically track staff weed management time. Based on staff descriptions, we estimated about 10 to 15 percent of Agricultural and Grazing Lease Bureau field staff time is related to weed management. Approximately 5 percent of Forest Management Bureau staff time is attributed to noxious weed management.

Other Resource Development

The department funds a variety of resource development projects affecting noxious weeds on state lands. These include timber sales, mining reclamation, and other re-vegetation projects. While these activities are not typically described as weed control, there is a direct impact on noxious weeds. We did not compile a listing of the total funding used in this regard.

Weed Management Responsibility

The primary source of noxious weed management funding for agricultural and grazing leases is derived from the resource development account. As indicated previously, approximately \$47,000 was budgeted for fiscal year 2001-02. Typically, the central office queries land/unit offices to identify potential projects. Based

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on the response of land/unit office staff, identified projects are prioritized and funding is allocated. For the last fiscal year, not all of the resource development allocation for weed control was designated for weed control projects by the end of the fiscal year, and the remaining funds (\$16,000) were applied to other department priorities.

We determined the current DNRC approach does not necessarily identify noxious weed management priorities for trust lands, whether leased, un-leased, agricultural, grazing, or timber. That does not mean the projects we discussed and reviewed with staff lacked merit. The department is using available funding for legitimate weed management projects. For example, over the past ten years, most state lands offices participated in the introduction of beetles to control leafy spurge. Significant progress has been demonstrated as a direct result of these department efforts. However, we found land/unit office staff typically submits candidate projects based on the recognition significant funding was not available. Generally, land/unit office staff do not categorize trust lands in their jurisdiction in terms of noxious weed infestations.

As mentioned in previous sections, the department's approach is to rely on lessees for weed management on leased lands. Therefore, DNRC does not request dedicated weed management funding based on an assessment of state-wide priorities. Traditionally, officials use amounts approved in previous years as the basis for succeeding budget requests. In addition, the department has not utilized available recreational use account funding for noxious weed control.

We believe the department should establish a more formal process recognizing a level of responsibility for participation in weed management on trust lands. Department responsibilities include both stewardship associated with sections 77-1-202 and 77-6-101, MCA, and oversight associated with the requirement to monitor lease agreements. In order to meet both obligations, the department should establish procedures for:

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- ▶ Land/unit office identification of potential weed management projects warranting involvement by the department.
- ▶ Consolidating prioritized DNRC noxious weed management projects, including budget proposals for executive and legislative consideration.

Department Supports Need to Prioritize

While recognizing there are many internal priorities, department officials supported the need to categorize a noxious weed management priority. A weed management priority could be compared to other priorities to help the legislature and executive branch determine the most effective use of funding resources.

Recommendation #5

We recommend DNRC:

- A. Identify land/unit office weed management projects warranting involvement by the department.**
- B. Consolidate DNRC weed management projects and develop budget proposals for executive and legislative consideration.**

Agency Responses



JUDY H. MARTZ
GOVERNOR

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February 10, 2003

RECEIVED

FEB 11 2003

LEGISLATIVE AUDIT DIV.

Jim Nelson
Performance Audit Manager
Legislative Audit Division
P.O. Box 201705
Helena MT 59620-1705

Dear Mr. Nelson:

Thank you for permitting the department to review and comment on your findings and recommendations regarding the performance audit: Noxious Weed Management on State Lands.

Recommendation:

The performance audit contained one recommendation, in three parts, to the department as follows:

- Develop biennial report criteria and format to assess the status of noxious weeds on state lands in each county.
- Establish procedures for joint weed district and state agency report preparation, coordination, and submission.
- Consolidate weed district biennial and agency reports into a statewide state lands noxious weed report for submission to the legislature and governor.

Response:

We concur with the recommendation. The department can compile information provided by counties and state land management agencies that would report a county self-assessment of weed control success on state lands.

The recommendation can be initiated in the 2005 biennium by developing a report format that would include joint reporting by county weed districts and state agencies. The report format will also include a county self-assessment of weed control activities on state lands within each county. A cooperative process with representatives from counties and state land managers will be used to establish the report criteria.

Sincerely,

Ralph Peck
Director

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DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

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FEB 11 2003

LEGISLATIVE AUDIT DIV.

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February 10, 2003

Jim Nelson
Performance Audit Manager
Legislative Audit Division
PO Box 201705
Helena MT 59620

Dear Mr. Nelson:

I have reviewed and carefully considered the information and recommendations made in your performance audit of Noxious Weed Management on State Lands. In the report, there are four recommendations made to the Department of Natural Resources and Conservation. The following are my responses to each along with additional comments on information presented in the report.

Recommendation #1 – Review alternatives for establishing grazing lease incentives to promote weed management.

DNRC does not believe that this recommendation will result in improved weed management. The audit report itself suggests that the current rental adjustments are not viewed by lessees as an incentive. Additionally, given the number of tracts and leases the Department manages, we do not believe this could be equitably implemented.

Recommendation #2 – Identify noxious weed infestations and establish a process for monitoring priorities.

DNRC concurs with this recommendation. Over the next year, the Department will evaluate and develop procedures to better identify significant infestations along with methods to monitor weed management compliance.

Recommendation #3 – Establish weed management enforcement options.

DNRC concurs with this recommendation. Enforcement authority similar to that of the county weed districts may offer the department an additional management tool in cases of repeated non-compliance with weed management requirements. We envision that this would actually be used on a very limited basis. Options will be reviewed prior to the next legislative session.

Recommendation #4 – Identify weed management projects warranting DNRC involvement.

The DNRC concurs with this recommendation. In conjunction with identification of noxious weed priorities (recommendation #2), the department will establish a more formal process for identifying and prioritizing projects which merit funding.

Lastly, I would like to comment on the audit assessment and conclusions drawn from the information presented in Table 2 of the report. To begin, while you acknowledge that roads influence your assessment, I believe you have underestimated the degree to which they skew the information collected. Land managers are well aware that roadways act as a conduit in the spread of weed infestations. As such, your exclusive use of roadside tracts makes any conclusion you infer across all of our ownership very questionable.

Be that as it may, I am especially troubled by your conclusion that the survey indicated weed infestations might be as high as 21% of the acreage of state land. I believe you have grossly erred in this extrapolation based on the type of data you collected. Your basis for the estimate was that on 21% of the parcels visited, the level of infestation was between 10 and 100%. However, the infestation estimates **were not** of the percentage of the tract area that was covered in weeds, but rather the density of the weeds where they grew. For example, a noted infestation may have been 100% of the vegetation, but only occupied 1 acre of a 640 acre parcel. Since your survey dealt with weed densities and not the amount of area occupied, it is incorrect to use the data to come to any conclusion or to even speculate on the percentage of state lands which have weeds. Using your data and methods of inference from Table 2, a reader would draw the conclusion that 57% of state lands have some level of weed infestation. By comparison, staff who annually inspect these lands have estimated that from 1 to 5 percent of our acreage have noxious weeds.

In closing, let me assure you that I and Department staff understand the importance of noxious weed control for the lands we manage. We appreciate the opportunity to work with you on this issue.

Sincerely,



Bud Clinch
Director